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(54) Title: METHODS FOR ACQUIRING AND PROCESSING SEISMIC DATA FROM QUASI-SIMULTANEOUSLY ACTIVATED TRANSLATING ENERGY SOURCES

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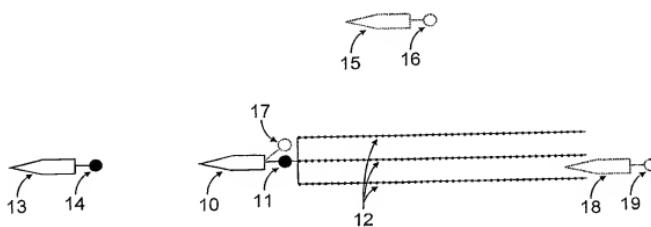
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(57) Abstract: A method for obtaining seismic data is disclosed. A constellation of seismic energy sources is translated along a survey path. The seismic energy sources include a reference energy source and a satellite energy source. The reference energy source is activated and the satellite energy source is activated at a time delay relative to the activation of the reference energy source. This is repeated at each of the spaced apart activation locations along the survey path to generate a series of superposed wavefields. The time delay is varied between each of the spaced apart activation locations. Seismic data processing comprises sorting the traces into a common geometry domain and replicating the traces into multiple datasets associated with each particular energy source. Each trace is time adjusted in each replicated dataset in the common-geometry domain using the time delays associated with each particular source. This result in signals generated from that particular energy source being generally coherent while rendering signals from the other energy source is generally incoherent. The coherent and incoherent signals are then filtered to attenuate incoherent signals.